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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

QIN, YIXING

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,734

Applicant(s)

OKUNISHI ET AL.

Examiner

Yixing Qin

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

In response to applicant's amendment received 8/23/06, all requested changes have been entered.

Response to Arguments

Applicant's arguments filed 8/23/06 have been fully considered but they are not persuasive. Regarding the independent claims, the applicant's submitted prior art in the background of the invention (Applicant's Background) discloses the usage of shipment data and codes in a process cartridge. Destination data is known to be used in process cartridges and destination codes are admitted to be important in the determination of product types. Such information needs to be stored to be of use, and it would be obvious to store such information in a pertinent storage area, such as the process cartridge. Please see the rejection below for more detail.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) and in view of the Applicant's background.

Regarding claims 1 and 12, Miyamoto discloses a process cartridge detachably attached to a main body of an image forming device, the process cartridge comprising:
a component for carrying out image formation (column 1, lines 12-17); and
a nonvolatile memory for storing (Fig. 3)

It does not explicitly disclose "first destination information comprising a shipment destination, to be used to control a printing operation by a control system of the main body of the image forming device, and

second destination information, comprising a destination code, not to be used to control the printing operation by the control system of the main body of the image forming device."

However, the applicant's background discloses in P[0005] and P[0006] that process cartridges are known to have shipment destinations and that destination codes are needed for the reasons of product management. P[0006] discloses how the shipment destination data is accepted (or not accepted) by a printer, meaning that it can control the functionality of the printer.

Miyamoto and Applicant's Background are combinable because both are in the art of process cartridges.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a process cartridge with the above information.

The motivation would have been to have a cartridge that could work in multiple locations.

Therefore, it would have been obvious to combine Miyamoto and Applicant's Background to obtain the invention as specified.

II. Claims 8, 16, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) and in view of the Applicant's background and further in view of Ueno (U.S. Patent No. 6,144,812).

Regarding claim 8, Miyamoto discloses A process cartridge detachably attached to a main body of an image forming device, the process cartridge comprising:

- a component for carrying out image formation (column 1, lines 12-17); and
- a nonvolatile memory (Fig. 3)

It does not explicitly disclose "an address at which data comprising a shipment destination used by a control system of the main body of the image forming device is stored,

a first unused address at which data comprising a destination code is stored and of which use by the control system of the main body of the image forming device is not defined, and"

However, Ueno discloses in Fig. 2, item 21 that, for example, a manufacturing date, would not have any control usage. Although there is no "value" as shown in Fig. 2

Art Unit: 2625

of Ueno, one knows that in order to store information in memory, it would be in the form of bits or hexadecimal values as shown in Miyamoto.

The applicant's background discloses in P[0005] and P[0006] that process cartridges are known to have shipment destinations and that destination codes are needed for the reasons of product management. P[0006] discloses how the shipment destination data is accepted (or not accepted) by a printer, meaning that it can control the functionality of the printer.

Miyamoto and Applicant's Background are combinable because both are in the art of process cartridges.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a process cartridge with the unused addressed as claimed.

The motivation would have been to have a cartridge that could work in multiple locations.

Therefore, it would have been obvious to combine Miyamoto and Applicant's Background to obtain the invention as specified.

a second unused address at which no data is stored and of which use by the control system of the main body of the image forming device is not defined. (column 3, line 53 shows that a non-volatile memory is used. In the table in the same column, there is a counter there are vacant addresses 5-63 and the value is current assigned to FFFFH. None of the addresses 5-63 are used as shown in the particular table in column 3)

Regarding claims 16 and 17, Miyamoto discloses various values stored in a process cartridge.

It does not explicitly disclose "wherein the at least one reference value is a voltage value."

However, Ueno, discloses in Fig. 2, item 23 that there is a default primary high-voltage bias setting value.

Both references are in the art of using process cartridges to enhance the capabilities of a printer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to store information regarding a voltage value.

The motivation would be to use the voltage value for information regarding a process cartridge

Therefore, it would have been obvious to combine both references to obtain the invention as specified.

Regarding claims 18 and 20, Miyamoto discloses wherein:

It does not explicitly disclose "the first destination information comprises version information to be used to determine at least one reference value used in the printing operation, and to adjust the at least one reference value when the process cartridge is a different version than an original version."

However, the information in item 21 of Fig. 2 of Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory

Both references are in the art of image processing and using memory for the storage of data in regards to an image formation section.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains version information.

The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

III. Claims 2-7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in view of the Applicant's Background and further in view of Hirst et al (U.S. Patent No. 5,930,553)

Regarding claim 2, Miyamoto and the Applicant's background discloses the storage of data in a process cartridge.

It does not explicitly disclose "wherein the second destination information is stored at an address at which a lot number of the process cartridge is to be stored."

However, the tertiary reference, Hirst et al discloses in Fig. 2 and column 3, lines 60-62 that Fig. 2 is "...one possible consumable memory segmentation scheme..."

Hirst et al defines "consumables" in column 1, line 17 as "...toner, ink, ribbon, photoconductor, developer, etc... One can see from item 19a, that there is various data to identify the cartridge. One would understand that a lot number is basically used to identify an item.

All references are in the art of using memory to enhance the performance of image forming parts in a printer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included data for the purpose of identifying a particular cartridge in the cartridge's memory.

The motivation would be to ensure that a particular cartridge is fit for a particular printer

Therefore, it would have been obvious to combine all three references to obtain the invention as specified.

Regarding claim 3, Miyamoto and the Applicant's background discloses the storage of data in a process cartridge.

It does not explicitly disclose "wherein the second destination information is in a format to be displayed on a prescribed display unit by the control system of the main body of the image forming device."

However, the tertiary reference, Hirst et al discloses in column 1, lines 21-24 that "...near the end of the consumable's life, the print engine displays a message to the user on the front panel of the device or a host device..." One would understand that this front panel could be the operational unit as mentioned by Miyamoto et al and that a variety of information could be displayed – it is just a matter of design to display information from the memory instead of just a message. It is also well-known that operation units can have a display (such as a small LCD

All references are in the art of using memory to enhance the performance of image forming parts in a printer.

The storage of information in hex and the displaying of the information on a display are also well known in the art, and it would have been obvious to one of ordinary skill in the art at the time of the invention to have a display unit to display information in the memory.

The motivation would be to give users crucial information regarding the performance of the components in the printer

Therefore, it would have been obvious to combine all three references to obtain the invention as specified.

Regarding claim 4, Miyamoto discloses wherein the second destination information is stored in the nonvolatile memory in an order displayed on the display unit.
(column 4, line 21)

Regarding claim 5, Miyamoto and the Applicant's background discloses the storage of data in a process cartridge.

It does not explicitly disclose "wherein the second destination information constitutes part of a lot number of the process cartridge."

However, Hirst et al disclosed in Fig. 2 – item 19a – that there are three items stored to help identify the printing component. These together can make a lot number and the second destination information could be either of the three items in the box 19a. It would simply be a matter of design to assign a certain amount of information to a destination or lot number

All references are in the art of using memory to enhance the performance of image forming parts in a printer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have stored the lot number in a particular address in the memory areas of Miyamoto and Ueno.

The motivation would be to simplify the task of identification when not all data is needed in order to identify a particular component

Therefore, it would have been obvious to combine all three references to obtain the invention as specified.

Regarding claim 6, Miyamoto discloses wherein the lot number is stored in the nonvolatile memory in ASCII. (column 3, shows data in hexadecimal form. Since ASCII is also a well known standard in storing information, it would have been obvious to one skilled in the art to use ASCII instead of hexadecimal)

Regarding claim 7, Miyamoto discloses wherein the lot number is stored in the nonvolatile memory by using ASCII and hexadecimal notation. (Again, as mentioned above, both ASCII and hexadecimal notation are well known, and would be obvious to use standardized notations in information storage)

Regarding claim 9, Miyamoto discloses wherein a median of a parameter range for controlling a printing operation is stored at the first address. (column 4, lines 17-21 discloses that "[a]s the photosensitive drum 12 in the process cartridge 39 shows fluctuation in sensitivity, the correction value for the sensitivity is measured for each process cartridge 39, and the measured correction value is stored as the process conditions 1 and 2 in the non-volatile memory 104." The contents of the memory are shown in the table in column 4. It would be a matter of design to store the median value in a given memory address since any value of the range of values could be stored. There are also many addresses where the information could be stored)

Regarding claim 10, Miyamoto discloses wherein the control system of the main body of the image forming device judges a version of the process cartridge based on a value stored at the first address. (column 3, that there is a serial number in addresses 0-1.)

Regarding claim 11, Miyamoto discloses wherein a frequently used value out of values stored at the first addresses is stored at a lower address than a less frequently used value. (The Miyamoto et al reference discloses in the tables in columns 3 and 4 that the needed information (i.e. information that is accessed more) is in the lower addresses of the memory and that free memory addresses take up the rest of the memory (i.e. the upper addresses). Also note Fig. 5A and column 4, lines 40-45)

IV. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in of the Applicant's Background further in view of Hirst et al (U.S. Patent No. 5,930,553).

Regarding claims 13 and 14, Miyamoto discloses various ways to store information in a process cartridge.

It does not explicitly disclose "wherein the lot number shows that the process cartridge is a value pack/recycled product."

However, the applicant discloses in the submitted prior art in page 2, lines 13-19 of the specification the comparison of a standard and a value pack. Also, since recycled products are well known, it would be obvious to one of ordinary skill in the art at the time of the invention to include information that a cartridge contains recycled parts

Therefore, it would be obvious to include in the lot number that a cartridge is a value pack in the memory information of the combined invention of the first three references.

The motivation would be to help identify items that are the same, but come in different packaging and quantities.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

V. Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in of the Applicant's Background in view of Hirst et al (U.S. Patent No. 5,930,553) and further in view of Ueno (U.S. Patent No. 6,144,812).

Regarding claim 15, Miyamoto discloses various information stored in a process cartridge.

It does not explicitly disclose "wherein the data used by the control system of the main body of the image forming device is not based on a version of the process

Art Unit: 2625

cartridge, and data included in the first unused address is based on the version of the process cartridge."

However, the information in item 21 of Fig. 2 of Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory

All the references are in the art of image processing and using memory for the storage of data in regards to an image formation section.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains version information.

The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Art Unit: 2625

VI. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) and in view of the Applicant's background and in view of Ueno (U.S. Patent No. 6,144,812) and further in view of Applegate et al (U.S. Patent No. 5,995,774). m

Regarding claims 21, 22 and 23, Miyamoto discloses a copier containing the various claimed parts and process cartridge.

It does not explicitly disclose "wherein the image forming device comprises a photoreceptor drum, a charger, an exposing device, a developing device, a cleaner and a toner reservoir as components configured to execute image formation, and the process cartridge includes only the toner reservoir."

However, Applegate et al discloses in the first few sentences of the abstract a detachable cartridge containing a toner reservoir.

All references are combinable because they are all in the art of using process cartridges in a printing device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a process cartridge with a toner reservoir in Miyamoto's invention.

The motivation would have been to enable toner to be easily changed by swapping out the cartridge.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



YQ



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